

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 57173984  
PUBLICATION DATE : 26-10-82

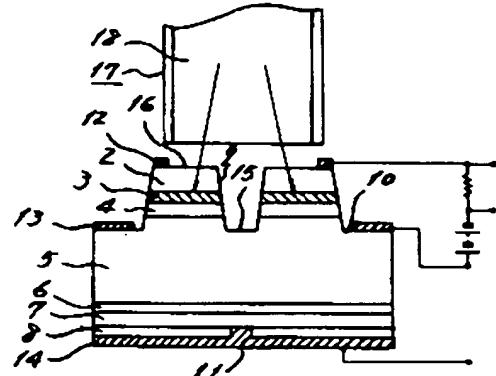
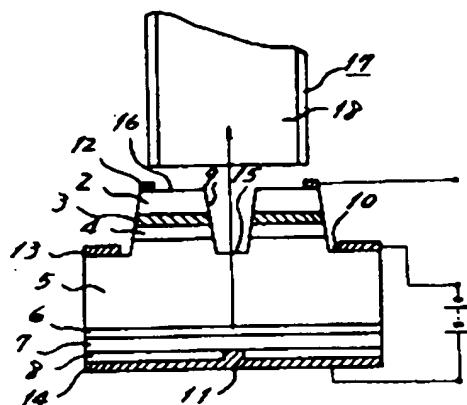
APPLICATION DATE : 20-04-81  
APPLICATION NUMBER : 56059950

APPLICANT : OMRON TATEISI ELECTRONICS CO;

INVENTOR : NONAKA MASAHIRO;

INT.CL. : H01L 33/00 H01L 31/04

TITLE : LIGHT EMITTING AND DETECTING ELEMENT



ABSTRACT : PURPOSE: To allow the manifestation of both functions of light emission and detection without cancellation with excellent efficiency of coupling with an optical fiber, by positioning a light detecting part on the connection side of the optical fiber to provide light emission and detection surfaces corresponding to light emission and detection parts.

CONSTITUTION: The light emitting part and the light detecting part having the light detection spectrum sensitivity characteristic including the light emission spectrum of light outgoing from this light emitting part are lamination-formed to position the light detecting part on the connection side of the optical fiber 17 and provide the light emission surface 15 and detection surface 16. The isolation of the light emitting and detecting part in the layer structure allow the constitution for the best manifestation of each function. Besides, the light detecting part can be arranged close to the connection side of the optical fiber 17 with heat generated at the light emitting parts dissipated with good efficiency by mounting the back surface side. Further, hand gap is enlarged greater in the light emitting layer than in detecting layer to provide the entire region of the light emission spectrum with light detection sensitivity.

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